

EDITORIAL

JOHANNES MÜLLER, SPEAKER OF THE GRADUATE SCHOOL

During the last semester break, Graduate School members spread out across the continent for fieldwork, excavations, conferences and other scientific activities. Slovakia, the Ukraine and Büdelsdorf were among the destinations, to name just a few selected areas. The publication highlights of the past months include papers co-authored by our aDNA team in Nature Communications and Science, as well as a review of our 2011 workshop proceedings in Antiquity (more information in this newsletter).



For the current winter term, the Graduate School has again invited researchers from different fields to provide insight into their scientific work during the Biweekly Colloquia lecture series. One guest speaker is John Bintliff, who intends to offer “a very different interpretation for the fascination archaeologists and historians find in historical and prehistorical landscape reconstruction”, as he informed us in advance. Other upcoming Colloquia topics are, for example, the new socio-economic landscape of Northwestern Jutland at the dawn of the 3rd millennium, climate and causation in history and prehistory, and ancient salt production in Central and Eastern Europe.

Recently, our Graduate School has taken an important step towards deeper integration into international research networks by joining “Dialogues with the Past”. This cross-national “Nordic Graduate School in Archaeology” includes archaeology departments from all the Nordic countries as well as from Estonia and St. Petersburg, altogether more than twenty different institutions.

A wonderful and productive winter term to all members, partners and friends of the Graduate School!

Research Highlight

FROM THE DOMESTIC PIG TO SOCIAL CONTACT

While some inhabitants still hunted seals and wild boar on the Western Baltic coast, other inhabitants south of the Elbe River already implemented crop cultivation and animal husbandry. During the 5th century BC, the river represented a border between Mesolithic and Neolithic cultures. At the same time, neighboring groups with large developmental differences also existed in many other regions of Europe. Thus, it has been questioned for many decades within archaeology, cultural studies and related fields, whether the members of the quite different cultures held direct contact with one another. A research group led by Dr. Ben Krause-Kyora and Professor Almut Nebel of Kiel University has now provided clear evidence that hunters and farmers were not only acquainted with each other but even traded live animals.

In the scientific journal Nature

Communications (online) the research group reports that members of the Mesolithic Ertebølle culture already held domestic pigs as early as 4600 BC, although they were – as hunters and gatherers – not yet familiar with animal husbandry. Krause-Kyora concluded that they most likely obtained the animals from the members of the more developed Neolithic cultures south of the Elbe River, who were already agriculturally active. “Thus, we can show for northern regions that direct contact existed between hunters and gatherers, on the one hand, and farmers on the other hand”, mentioned Krause-Kyora with satisfaction. The new results are also meaningful from an evolutionary perspective: “They provide us with important information on how domesticated animals spread to Northern Germany and how the early phases of domestication proceeded”.



Ben Krause-Kyora pulls out a tooth from the lower jaw of a pig to extract ancient DNA from it.

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The Kiel research team investigated the ancient DNA (aDNA) from the bones and teeth of a total of 63 pigs, which were discovered at archaeological excavations in Northern and Central Germany.

The molecular genetic analyses were carried out in the aDNA laboratory of the Graduate School Human Development in Landscapes. The analysis of the mitochondrial DNA, which is exclusively inherited along the maternal line, revealed that three animals from former Ertebølle settlements in Grube-Rosenhof (Eastern Holstein) and Poel (Mecklenburg-Western Pomerania) exhibit a genetic profile that originated in the Middle East, which was not present among wild Northern European counterparts. This finding shows that the three Ertebølle animals had maternal ancestors from the Middle East - similar to the domestic pigs of Neolithic neighbors. Domestic pigs had spread in previous centuries to the region south of the Elbe River due to the expansion of farmers and animal breeders from the so-called Fertile Crescent (today Syria, Turkey and Iraq).

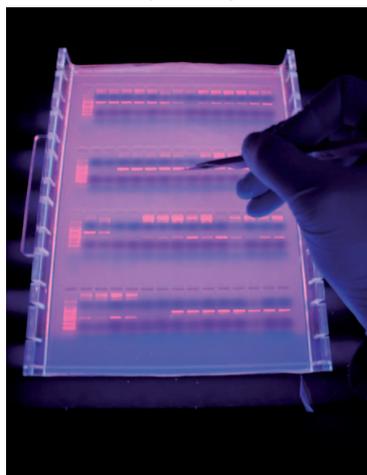
More information is available on the Graduate School website at www.uni-kiel.de/landscapes/allgemein/news_detail/20130827-adna_pigs.shtml

LATEST DEVELOPMENTS IN ENVIRONMENTAL ARCHAEOLOGY

Environmental archaeology is an expanding subject in European Archaeology. 30 years after its foundation, the Association for Environmental Archaeology (AEA) held its annual fall conference in Kiel this year. The meeting with the title ‘Social Space and Environment: Landscape Reconstruction in Environmental Archaeology’ was supported by the Graduate School. In addition to graduates from Kiel some 60 researchers from all over Europe participated in the event.

The talks were organized in four sessions, of which one concentrated on methodological progress and new proxies for assessing societal and environmental change.

Among the new or further-developed proxies discussed at the conference were, e.g. cereal phytoliths, sheep isotopic data and tree rings. The other sessions focused on social space



With the help of agarose gel electrophoresis, PCR-amplified ancient DNA fragments can be separated by their size and then specified by comparison with DNA molecules of known size.



and farming communities, social consequences of environmental restrictions (e.g. shortage of salt), and quantification and modelling of environmental and economic processes.

Lively debates took place in a productive and cheerful fashion and a number of Kiel studies were demonstrated in the field during excursions to Haithabu and Eastern Holsatia. AEA chair Andy Howard was pleased about the organization and successful realization of the conference and underlined Kiel's growing importance in environmental archaeology during the last years, a development he attributed considerably to the research activities of the Graduate School.

More information about the AEA: <http://envarch.net/>

GRADUATE SCHOOL IN ANTIQUITY

The proceedings of our international workshop "Socioenvironmental dynamics over the last 12,000 years: the creation of landscapes II (held in Kiel March 14-18, 2011) have been reviewed in *Antiquity*



(Volume 87, Number 337, p. 942-947). In Robert Witcher's *New Book Chronicle*, which includes reviews of several works on the past, present and future of people and environment, the Graduate School is said to have "established itself as an important player in European landscape archaeology, promoting a highly interdisciplinary approach spanning the humanities and sciences in pursuit of key questions about past societies and environment" (p. 944). After this praise, the author reviews the strengths and weaknesses of several of the 17 papers assembled in the volume, which was edited by Graduate School members Jutta Kneisel, Wiebke Kirleis, Marta Dal Corso, Nicole Taylor and Verena Tiedtke.

Link to the full Book Review in *Antiquity*:
<http://antiquity.ac.uk/ant/087/ant0870942.htm>

RESEARCH PLANS FOR THE NEXT YEARS WITH INSTANT FEEDBACK



During coffee breaks, the Introductory Workshop participants took the opportunity to enjoy the autumnal development of the landscape.

On November 8 and 9, the 3rd generation of PhD students and the new postdoctoral fellows presented their research projects at the Graduate School's Introductory Workshop II. It took place in Bad Malente, where Holstein Switzerland and Lake Keller offered a wonderful backdrop for the programme of the workshop. Vivid discussions about approaches, topics and their allocation to theories put a strain on the schedule of talks, but this was compensated for by a spontaneous after-dinner session. During the presentations it became clear that many new members of the Graduate school have already been integrated into the existing research networks and are also developing new ones, including principal investigators as well as postdocs and doctoral students.

SUCCESSFUL SUMMER SCHOOL

Ideas can be communicated, relationships highlighted, and facts reproduced with the help of models. Accordingly, it is not surprising that models and modeling increasingly gain importance in science and are accorded more attention in teaching. The particular strength of models lies in interdisciplinary exchange and in their transdisciplinary application. This is a special challenge for teaching, since general disciplinary courses can only provide very limited interdisciplinary instruction. One solution to this is found in the interdisciplinary training program of the Graduate School Human Development in Landscapes. Another supplementary solution can be offered by an interdisciplinary summer school. Such a summer school on "Modeling Human Behavior in Landscapes" was carried out from 30 July – 07 August 2013 at Noer Castle, north of the city of Kiel, on the coast of the Baltic Sea. This conference offered not only participants from different disciplines but also participants from different countries the opportunity to merge scientific traditions and skill levels. The concept of bringing people with different backgrounds together to jointly work on modeling problems proved to be successful. The participants augmented each other in a very productive manner and reciprocally introduced their own standpoints, investigations and scientific traditions.

Oliver Nakoinz

More information is available on the Graduate School website at http://www.uni-kiel.de/landscapes/allgemein/news_detail/20131030-modelling_summer_school.shtml

STAFF & PERSONAL NEWS

Katja Winkler presented a poster about "Ahrensburgian and Swiderian of the Younger Dryas on both sides of the middle Oder River. A research based on archaeological data and natural conditions in the Late Glacial" at the meeting of the UISPP Commission for the Final Palaeolithic of Northern Eurasia. The commission met at Schloss Gottorf on November 5-7.

Andrey Mitusov won the poster prize of the AEA Autumn Conference for his contribution titled "Conception of the Calculation of Landscape Limits for Inhabitants Based on Terrain Fragmentation by Landform Types".

SELECTED EVENTS

(COMPLETE CALENDAR: WWW.UNI-KIEL.DE/LANDSCAPES)

Venue for Biweekly Colloquia: Leibnizstraße 1, Room 204

NOVEMBER

Monday, November 18, 5:00 p.m. – **Biweekly Colloquium: Andreas Vött** (Mainz University): The Olympia Tsunami Hypothesis - new geoarchaeological aspects concerning the sedimentary burial of ancient Olympia (Peloponnese, Greece)

DECEMBER

Monday, December 2, 5:00 p.m. – **Biweekly Colloquium: John Bintliff** (Leiden University): The Landscape Archaeologist, Gould's Male Nipple and the Planck-Mach Debate

Friday, December 6, 3:00 p.m. – **GS Plenary Meeting** with reports and elections – Leibnizstr. 1, Room 209a+b

Friday, December 6, after the Plenary Meeting – **GS Christmas Party** – Leibnizstr. 3, 1st floor

Monday, December 16, 5:00 p.m. – **Biweekly Colloquium: Anthony Harding** (University of Exeter): New light on ancient salt production in Central and Eastern Europe

JANUARY

Monday, January 13, 5:00 p.m. – **Biweekly Colloquium: Johan Ling** (Gothenburg University): Rock Art and Seascapes in Scandinavia